



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,252	01/12/2007	Renato Caretta	07040.0259	9678
22852	7590	10/05/2010		
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER ROGERS, MARTIN K	
			ART UNIT	PAPER NUMBER
			1791	
			MAIL DATE	DELIVERY MODE
			10/05/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/577,252

Applicant(s)

CARETTA ET AL.

Examiner

MARTIN ROGERS

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 33-64 is/are pending in the application.
- 4a) Of the above claim(s) 36 and 41-64 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 33-35 and 37-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB06)
Paper No(s)/Mail Date 4/26/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Claims 36 and 41-64 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species and apparatus for manufacturing a tire, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 7/26/2010.

Applicant's election with traverse of claims 33-35 and 37-40 in the reply filed on 7/26/2010 is acknowledged. The traversal is on the ground(s) that the examiner did not apply correct restriction practice according to M.P.E.P. 803, did not prove a lack of unity of invention between groups I and II, and did not prove lack of unity of invention with the cited art. This is not found persuasive because although Applicant asserts on page 1 of the remarks that USP 6183582 to Gregg does not disclose the subject matter of group III, Applicant simply states this without providing any evidence of express arguments as to the specific shortcomings of Gregg. The examiner therefore maintains that Gregg discloses the subject matter of claim 53. Applicant's assertion that no evidence has been provided for lack of unity of invention among groups I and II is non-persuasive as it mischaracterizes the requirements for lack of unity of invention. As the Election/Restriction made clear, the entire subject matter of claim 53 is old in the art and so there is lack of unity as the shared special technical feature is already known in the art. Because the *claims of the application* lack unity of invention, Applicant is required to elect a single group corresponding to a single invention. Applicant further states that there is no search burden to search the claims of Groups I and III together and that

M.P.E.P. 803 states that such a burden must exist in order for the restriction requirement to be proper. At the outset, the examiner notes that there is a search burden due to the separate classification and divergent fields of search for the two groups. However, such discussion is moot because the section of the M.P.E.P. which applicant cited is directed towards applicants filed on 35 USC 111. The present application is filed under 35 USC 371 and is therefore subject to different restriction criteria. Furthermore, as noted the special technical feature shared by the groups is known, the basis of any patentability for each group would be different – i.e., there is a burden to separately determine the patentability of each group.

Applicant's argument on page 2 of the remarks that no reasons were provided for lack of unity of invention is unclear. As noted above, Gregg is cited to support the lack of unity. The examiner maintains that the application of Gregg to the subject matter of claim 53 was proper. Furthermore, the claims of the elected group are rejected over prior art as indicated below and these rejections further provide support for the holding of lack of unity.;

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 33, 34, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caretta (Pre-Grant Publication 2002/0125615) in view of Blickwedel et al. (WO 00/03867), and Midgley et al. (USP 1394928). Note that USP 6923879 is an English language equivalent of the WO document and used below to make the following rejections.

In regards to claim 33, Caretta discloses a process for creating pneumatic tires (Abstract) in which a liner is created and cured on a toroidal support which matches the shape of the inner surface of a tire ([0083]) and then the remainder of a tire is built on the liner layer and cured in a mold which conforms in shape to the final shape of the tire ([0091]). Caretta does not disclose precuring both a liner and a carcass portion of the tire in a hermetically sealed chamber prior to the tire vulcanization/completion step.

Blickwedel discloses that by performing a precure operation on the carcass layer in addition to a liner layer (Column 6, lines 67), the carcass layer including horn profiles

(Abstract), several advantages can be achieved, such as the ability to create a variety of tires from a single production line (Column 6, lines 35-38) and improved dimensions in the final tire (Column 4, lines 52-56). One of ordinary skill would therefore find it obvious to pre-cure a carcass layer of the tire in addition to the liner in the method of Caretta for the benefit of improving the dimensions of the final tire or increasing the adaptability of the process to different products (as disclosed by Blickwedel). Caretta discloses curing the liner layer of a tire in open air by applying heat through the tire support ([0084]). Caretta does not disclose how a carcass layer could be pre-cured. Caretta discloses that a variety of exemplary curing methods can be used to vulcanize the liner layer ([0084]), suggesting to one of ordinary skill in the art that any well known method for curing a pre-tire structure would also be suitable.

One of ordinary skill would turn to the disclosure of Midgley, which discloses that a carcass structure can be cured on a heated rigid support (page 2, lines 99-102). Midgley discloses that skilled artisan would consider it to be functionally equivalent to either heat the carcass structure in open air or under an applied fluid pressure (Page 2, lines 15-35). Midgley further discloses that a fluid pressure pressing the carcass against the rigid support can be supplied through a hermetically sealed container (Page 2, lines 35-47 and Page 4, lines 9-12). Midgley discloses that compressing the carcass against the rigid support during pre-curing has the additional benefit of creating a more uniform product (Page 1, lines 79-84 and 94-101) (Page 2, line 129 though Page 3, line 2). Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to perform the carcass and liner pre-curing on the heated supported required by

the previous combination in a hermetically sealed pressure vessel because this is functionally equivalent to curing in an open air environment (as disclosed by Midgley). One of ordinary skill would have been further motivated to utilize a hermetically sealed container for the additional benefit of ensuring the uniformity of the product (as disclosed by Midgley).

In regards to claim 34, Blickwedel further discloses that the belt structure be pre-cured (Column 3, line 46).

In regards to claim 37, Caretta further discloses heating with electrical heaters, which would generate heat at the surface of the rigid support ([0084]).

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Caretta (Pre-Grant Publication 2002/0125615) in view of Blickwedel et al. (WO 00/03867), and Midgley et al. (USP 1394928) as applied to claim 35 above, and further in view of Brewer (USP 4620561).

In regards to claim 35, Midgley is silent as to in what order heat and pressure and applied to the to the carcass during the curing operation, suggesting to one of ordinary skill in the art that any well known method of curing a portion of a tire under pressure would be suitable.

Brewer discloses that it is well known to pressurize a tire laminate prior to applying heat to the laminate (Column 1, lines 49-55). Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to pressurize the laminate of the previous combination before heating it because this is a well known order to perform the pressurized curing step required by the previous combination.

Claims 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Caretta (Pre-Grant Publication 2002/0125615) in view of Blickwedel et al. (WO 00/03867), and Midgley et al. (USP 1394928) as applied to claim 35 above, and further in view of Oku (Pre-Grant Publication 2002/0121324) or Dailliez (USP 5622669).

In regards to claim 37, Caretta further discloses that the toroidal support can be heated by a variety of exemplary methods ([0084]), suggesting to one of ordinary skill in the art that any well known method of providing a curing energy to a tire component would be suitable.

Oku suggests that a precuring operation can be performed by providing energy in the form of magnetic induction ([0031]). Dailliez also discloses that it is known to provide a curing energy through magnetic induction (Column 3, line 7). One of ordinary skill in the art would therefore be motivated to heat the tire component on the toroidal support of the above combination with magnetic induction because this is a well known method of providing a curing energy for a tire component (as disclosed by Oku and Dailliez).

In regards to claim 38, one of ordinary skill in the art would find it obvious to use magnetic induction for the reasoning provided for claim 37. It is the examiner's position that because the specification of the present application states that the presence of a magnetic field is the only thing necessary for heat generation within the tire, the use of a magnetic field for the reasoning presented above would be expected to have the tire-heating affect required by the claim.

In regards to claim 39, one of ordinary skill would appreciate that the heating time required is dependent on the type of tire, its size, shape and composition. One of ordinary skill would therefore use routine experimentation to determine the optimum curing conditions in order to adapt the vulcanization step to the specific tire being created.

In regards to claim 40, one of ordinary skill would appreciate that the curing pressure is dependent on the type of tires, its size, shape, and composition. One of ordinary skill would therefore use routine experimentation to determine the optimum curing conditions in order to adapt the vulcanization step to the specific tire being created.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARTIN ROGERS whose telephone number is 571-270-7002. The examiner can normally be reached on Monday through Thursday, 7:30 to 5:00, and every other Friday, 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Martin Rogers/

/Richard Crispino/
Supervisory Patent Examiner, Art Unit 1791